# Christopher W. Moore
*Curriculum Vitae*

JISAO: University of Washington Phone: 206-526-6779
NOAA-PMEL Fax: 206-526-6744
7600 Sand Point Way, NE, Bldg. 3 Email: Christopher.Moore@noaa.gov
Seattle, WA 98115 Refs: Available upon request

## Education

M.S. 1996 Physical Oceanography, University of Washington, Seattle
B.A. 1992 Physics, University of California, Santa Cruz

## Professional Experience

1998-present: Research Scientist, Joint Institute for the Study of the Atmosphere and Ocean (JISAO)
- Tsunami modeling & forecast system development
- Regional-scale ocean modeling and coupling to atmosphere models
- Geographic Information Systems (GIS) development
- Scientific visualization and data management systems

  1997-1998: Research Scientist, Washington State Department of Ecology
- water-quality monitoring in Puget Sound and Willapa Bay
- tidal analysis and modeling

## Current Funded Projects

Short-term Inundation Forecasting for Tsunamis – SIFT (NOAA funded)
PI: Vasily Titov (NOAA / University of Washington)

Landslide modeling harzards for the U.S. East coast (NRC funded)
PI: Vasily Titov (NOAA / University of Washington)

Coupled Bio-physical Models for the Coastal Gulf of Alaska (NSF funded)
PI: Al Hermann (JISAO), Dale Haidvogel (Rutgers U.)

Development of a Prototype NOAA Computational Grid (NOAA funded)
PI: Dan Schaffer (FSL – NOAA), Chris Moore (JISAO)

## Research Techniques

Numerical modeling:
- i-SALE impact/landslide modeling, coupling to Method of Splitting Tsunami (MOST) model
- developer and user of several 3-D, isopycnal and s-coordinate ocean models: Regional Ocean Modeling System (ROMS), Princeton Ocean Model (POM), Hallberg Isopycnal Model
- familiar with supercomputer cluster environment: MPI and OpenMP parallelization techniques, debugging tools, and C, C++, FORTRAN-90, and Java
- coupling to atmospheric models (WRF, MM5) using MPH and the Model Coupling Toolkit (developed at Argnonne National Labs)
- time-series analysis: spectral, tide-period harmonics, wavelet transforms

GIS and scientific visualization:
- GIS application development using ESRI's ArcGIS Engine framework
- Serving GIS data using OpenDAP/DODS, or ArcIMS Geospatial database
- Cave and ImmersaDesk application development using Cave5D, vGeo, VTK, Performer
- PC based 3-D rendering using VRML, Java3D, VisAD, Vis5D, VTK, 3D Analyst (GIS)
- GeoWall and Access Grid design and construction

**Field experience**

Extensive - including six cruises, research SCUBA certification, chemical analysis, sediment
coring, CTD deployment and analysis, current meter deployment and recovery


**Presentations within the last 2 years**

Modeling workshops taught (105 participants to date):
Melbourne, Australia: Jan 8-20, 2007
Bangkok, Thailand: Jun 26 – Jul 7, 2007
Jakarta, Indonesia: Aug 23 – Sep 2, 2007
Victoria Mahe, Seychelles: Jan 18-29, 2008
Cadiz, Spain: Mar 30 – Apr 4, 2008
Modeling tsunami wave generation and evolution due to the collapse of the Cumbre Vieja and its effect on the U.S.
atlantic coast: AGU, San Francisco, December 2008
Integrating ocean modeling results with GIS for use in research and emergency management
June 20, 2005: NOAA Office of Response and Restoration - Hazmat
January 11, 2005: American Meteorological Society Meeting, San Diego, CA
Cyberinfrastructure for atmospheric discovery - TeraGrid modeling of coupled ocean-atmosphere
environments December 14, 2004: American Geophysical Union, Fall Meeting, San Francisco, CA
Oceanographic analysis in the Bering Sea using ArcGIS Engine/Java/Java3D
August 10, 2004: ESRI International Users Conference, San Diego, CA
Coupling atmosphere and ocean models for the study of hurricane-like vortex generation
January 28, 2004: Ocean Sciences, Portland, OR

**Publications**

Wei, Y., E. Bernard, L. Tang, R. Weiss, V. Titov, C. Moore, M. Spillane, M. Hopkins, and U. Kânoğlu (2008): Real-time experimental forecast of the Peruvian tsunami of August 2007 for U.S. coastlines. Geophys. Res. Lett., 35, L04609

Vance, T.C., C.W. Moore, and N. Merati (2005): Integration of Java/Java3D-based oceanographic
analysis tools with GIS. In The 21$^{st}$ International Conference on Interactive Information Processing
Systems (IIPS) for Meteorology, Oceanography, and Hydrology, The 85th AMS Annual Meeting, San
Diego, CA, 9-13 January 2005

Moore, C.W., D.S. Nolan, and D.S. Schaffer (2004): Coupling atmosphere and ocean models for the
study of hurricane-like vortex generation. AGU, 84(52), Ocean Sci. Meet. Suppl., Abstract
OS41D-09, 2004